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EXAMINER	
WON, MICHAEL YOUNG	
ART UNIT	**PAPER NUMBER**
2155	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/045,287	ROBINS ET AL.	
	Examiner	Art Unit	
	Michael Y. Won	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 December 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,10-18,20-28 and 30-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,10-18,20-28,30,31 and 33-35* is/are rejected.

7)☒ Claim(s) *32* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the Request for Continued Examination and Amendment filed December 19, 2006.

2. Claims 1, 11, and 21 have been amended.

3. Claims 1-8, 10-18, 20-28 and 30-35 have been examined and are pending with this action.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 1, 11, and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The amended language of Claims 1, 11, and 21 recites "wherein after the chosen data unit is transmitted the first connection becomes a debit connection if credit required to transmit the chosen data unit exceeds the credit of the first connection. Regarding this element, the examiner cannot conclude why a "connection becomes a debit connection" on the basis of "credit required to transmit the chosen data", when "the

chosen data" has already been "transmitted". Either the claim needs to be amended to include a "next chosen data" or define within the body of the claim the functionality of a "debit connection". The examiner cannot sufficiently consider the amended limitation and/or perform a concise search because the claims are indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-8, 11-18, and 21-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonomi et al. (US 6,396,834 B1) in view of Klausmeier (US 5,561,663 A).

INDEPENDENT:

As per ***claim 1***, Bonomi teaches a method of performing virtual network connection merge, the method comprising:

assigning a relative frequency value to each network connection in a plurality of network connections, wherein a higher relative frequency value is assigned to a network connection requiring a higher relative bandwidth (see col.3, lines 38-40: "*individual connections consistent with the QoS parameters associated with each connection*";

col.10, lines 18-23: "*allocation of bandwidth proportional to the bandwidth with which each connection is setup with*" & "*features such as priorities*"; and col.11, lines 8-18: "*assuming equal priority, bandwidth is distributed proportionate to the desired bandwidth for each connection*");

allocating credits to ready network connections in the plurality of network connections in proportion to relative frequency values of ready network connections of a same virtual network connection merge (see col.12, lines 5-9: *each group is assigned a weight and the cells in the group are allocated an aggregate bandwidth proportional to the assigned weight*"), a ready network connection being a connection ready to send a data unit (see col.11, lines 41-44: "*ready for transmission*" and col.12, lines 19-20: "*ready for transmission*");

assembling one or more data units from data traffic of ready network connections that are not detected as debit connections (see col.11, lines 23-32: "*the farther a cell is placed from a current bucket, the later the cell is likely to be transmitted*"; and col.12, lines 19-24: "*The manner in which cells are placed in buckets and transmitted can vary depending on whether a connection is shaped or not shaped*");

determining a chosen data unit to be transmitted to an output channel from among the assembled data units, the chosen data unit belonging to a first connection in the ready network connections (see col.9, line 62-col.10, line 1: "*scheduler 470 to determine the ports on which (cells of) each branch queue needs to be transmitted*" and col.12, lines 19-20: "*a bucket with a cell ready for transmission is selected*"), wherein the

step of determining the chosen data unit depends on credit of the first connection (implicit: see col.8, lines 32-34);

transmitting the chosen data unit to the output channel (see col.8, lines 21-23: "*transmitted on output ports*"); and

wherein after the chosen data unit is transmitted the first connection becomes a debit connection if credit required to transmit the chosen data unit exceeds the credit of the first connection (see col.19, lines 12-21).

Bonomi does not explicitly teach of adjusting the credit of the first connection based upon the data unit transmitted.

Klausmeier teach of adjusting the credit of the first connection based upon the data unit transmitted (see col.3, lines 44-48).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teaching of Klausmeier within the system of Bonomi by implementing adjusting the credit of the first connection based upon the data unit transmitted within the method of performing virtual network connection merge because Klausmeier teaches that such means allows for the fair determination of which connection to be served next (see col.4, lines 13-15), otherwise the first connection will be repeatedly served for the same reasoning based on the credit.

As per ***claim 11***, Bonomi teaches of an integrated circuit configured to perform a virtual network connection merge, the integrated circuit comprising:

controller circuitry configured to control operations (see Fig.4) of:

assigning a relative frequency value to each network connections in a plurality of network connections, wherein a higher relative frequency value is assigned to a network connection requiring a higher relative bandwidth (see col.3, lines 38-40: "*individual connections consistent with the QoS parameters associated with each connection*"; col.10, lines 18-23: "*allocation of bandwidth proportional to the bandwidth with which each connection is setup with*" & "*features such as priorities*"; and col.11, lines 8-18: "*assuming equal priority, bandwidth is distributed proportionate to the desired bandwidth for each connection*");

allocating credits to ready network connections in the plurality of network connections in proportion to relative frequency values of ready network connections of a same virtual network connection merge (see col.12, lines 5-9: *each group is assigned a weight and the cells in the group are allocated an aggregate bandwidth proportional to the assigned weight*"), a ready network connection being a network connection ready to send a data unit (see col.11, lines 41-44: "*ready for transmission*" and col.12, lines 19-20: "*ready for transmission*");

assembling one or more data units from data traffic of a ready network connection that are not detected as debit connections (see col.11, lines 23-32: "*the farther a cell is placed from a current bucket, the later the cell is likely to be transmitted*"; and col.12, lines 19-24: "*The manner in which cells are placed in buckets and transmitted can vary depending on whether a connection is shaped or not shaped*");

determining a chosen data unit to be transmitted to an output channel from among the assembled data units, the chosen data unit belonging to a first connection in

the ready network connections (see col.9, line 62-col.10, line 1: "*scheduler 470 to determine the ports on which (cells of) each branch queue needs to be transmitted*" and col.12, lines 19-20: "*a bucket with a cell ready for transmission is selected*"), wherein the step of determining the chosen data unit depends on credit of the first connection (implicit: see col.8, lines 32-34);

transmitting the chosen data unit to the output channel (see col.8, lines 21-23: "*transmitted on output ports*"); and

wherein after the chosen data unit is transmitted the first connection becomes a debit connection if credit required to transmit the chosen data unit exceeds the credit of the first connection (see col.19, lines 12-21).

Bonomi does not explicitly teach of adjusting the credit of the first connection based upon the data unit transmitted.

Klausmeier teach of adjusting the credit of the first connection based upon the data unit transmitted (see col.3, lines 44-48).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teaching of Klausmeier within the system of Bonomi by implementing adjusting the credit of the first connection based upon the data unit transmitted within the integrated circuit configured to perform a virtual network connection merge because Klausmeier teaches that such means allows for the fair determination of which connection to be served next (see col.4, lines 13-15), otherwise the first connection will be repeatedly served for the same reasoning based on the credit.

As per ***claim 21***, Bonomi teaches a computer-readable medium carrying one or more sequences of one or more instructions for performing a virtual network connection merge, the one or more sequences of one or more instructions including instructions which, when executed by one or more processors, cause the one or more processors to perform the steps of:

assigning a relative frequency value to each network connection in a plurality of network connections, wherein a higher relative frequency value is assigned to a network connection requiring a higher relative bandwidth (see col.3, lines 38-40: "*individual connections consistent with the QoS parameters associated with each connection*"; col.10, lines 18-23: "*allocation of bandwidth proportional to the bandwidth with which each connection is setup with*" & "*features such as priorities*"; and col.11, lines 8-18: "*assuming equal priority, bandwidth is distributed proportionate to the desired bandwidth for each connection*");

allocating credits to ready network connections in the plurality of network connections in proportion to relative frequency values of ready network connections of a same virtual network connection merge (see col.12, lines 5-9: *each group is assigned a weight and the cells in the group are allocated an aggregate bandwidth proportional to the assigned weight*"), a ready network connection being a network connection ready to send a data unit (see col.11, lines 41-44: "*ready for transmission*" and col.12, lines 19-20: "*ready for transmission*");

assembling at least one data unit from data traffic of a ready network connection that are not detected as debit connections (see col.11, lines 23-32: "*the farther a cell is*

placed from a current bucket, the later the cell is likely to be transmitted"; and col.12, lines 19-24: "*The manner in which cells are placed in buckets and transmitted can vary depending on whether a connection is shaped or not shaped*");

determining a chosen data unit to be transmitted to an output channel from among the assembled data units, the chosen data unit belonging to a first connection in the ready network connections (see col.9, line 62-col.10, line 1: "*scheduler 470 to determine the ports on which (cells of) each branch queue needs to be transmitted*" and col.12, lines 19-20: "*a bucket with a cell ready for transmission is selected*"), wherein the step of determining the chosen data unit depends on credit of the first connection (implicit: see col.8, lines 32-34);

transmitting the chosen data unit to the output channel (see col.8, lines 21-23: "*transmitted on output ports*"); and

wherein after the chosen data unit is transmitted the first connection becomes a debit connection if credit required to transmit the chosen data unit exceeds the credit of the first connection (see col.19, lines 12-21).

Bonomi does not explicitly teach of adjusting the credit of the first connection based upon the data unit transmitted.

Klausmeier teach of adjusting the credit of the first connection based upon the data unit transmitted (see col.3, lines 44-48).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teaching of Klausmeier within the system of Bonomi by implementing adjusting the credit of the first connection based upon the data unit

transmitted within instructions for performing a virtual network connection merge because Klausmeier teaches that such means allows for the fair determination of which connection to be served next (see col.4, lines 13-15), otherwise the first connection will be repeatedly served for the same reasoning based on the credit.

DEPENDENT:

As per ***claims 2, 12, and 22***, which respectfully depend on claims 1, 11, and 21, Bonomi further teaches wherein the step of assembling at least one data unit comprises:

allocating the data traffic of the at least one data unit into memory cells (see col.4, lines 6-9); and

adding the memory cells to cell descriptor (CD) lists until an end of frame (EOF) cell is received, wherein the end of frame cell is used to identify unit boundaries (see abstract: "Sequence of cells forming a frame are buffered in the ATM switch until the end of frame cell is received").

As per ***claims 3, 13, and 23***, which respectfully depend on claims 1, 11, and 21, Bonomi teaches of further comprising calculating a higher credit for network connection that have data unit ready for transmission (see col.12, lines 66-67), wherein a ready data unit is a whole data unit with memory cells filled with data traffic (inherent).

As per ***claims 4, 14, and 24***, which respectfully depend on claims 2, 12, and 22, Bonomi further teaches wherein the step of transmitting the chosen data unit comprises:

allocating merge bandwidth for the chosen data unit (see col.12, lines 33-37);

adding memory cells of the chosen data unit to transmit lists (see col.10, lines 26-31 and col.15, lines 52-54); and

transmitting the memory cells of the chosen data unit to the output channel based on information in the transmit lists (see col.10, lines 26-31 and col.15, lines 54-61), wherein the memory cells of the chosen data unit are transmitted until an end of frame cell of the chosen data unit is transmitted (see col.13, lines 1-4).

As per ***claims 5, 15, and 25***, which respectfully depend on claims 1, 11, and 21, Bonomi teaches of further comprising: determining another chosen data unit to be transmitted the output channel (see col.13, lines 1-4); and transmitting the other chosen data unit to the output channel (see col.13, lines 12-21).

As per ***claims 6, 16, and 26***, which respectfully depend on claims 5, 15, and 25, Bonomi teaches of further comprising performing steps of the method until all data units from ready network connections with sufficient credit have been transmitted (inherent).

As per ***claims 7, 17, and 27***, which respectfully depend on claims 1, 11, and 21, Bonomi further teaches wherein the ready network connection includes Asynchronous Transfer Mode (ATM) connections (see col.1, lines 16-20).

As per ***claims 8, 18, and 28***, which respectfully depend on claims 1, 11, and 21, Bonomi teaches of further comprising:

assigning a bandwidth guarantee to each network connection (see col.10, lines 7-9 and col.12, lines 7-18);

receiving an overload traffic from a network connection having a relatively low bandwidth guarantee (implicit: see col.4, lines 6-15); and

storing the overload of traffic into at least one stored data unit (see col.10, lines 34-36).

6. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bonomi et al. (US 6,396,834 B1) in view of Santhanakrishnan (6,643,288 B1).

As per ***claim 31***, Bonomi teaches a method of performing a virtual network connection merge, the method comprising:

assigning a relative frequency value to each network connection in a plurality of network connections (see col.3, lines 38-40: "*individual connections consistent with the QoS parameters associated with each connection*"; col.10, lines 18-23: "*allocation of bandwidth proportional to the bandwidth with which each connection is setup with*" & "*features such as priorities*"; and col.11, lines 8-18: "*assuming equal priority, bandwidth is distributed proportionate to the desired bandwidth for each connection*");

assigning a credit to each ready network connection in the plurality of network connections (see col.12, lines 5-9: *each group is assigned a weight and the cells in the group are allocated an aggregate bandwidth proportional to the assigned weight*") in a round robin sequential fashion (see col.13, lines 1-4: "circular sequence'), a ready network connection being a connection ready to send a data unit (see col.11, lines 41-44: "*ready for transmission*" and col.12, lines 19-20: "*ready for transmission*");

when a ready network connection is assigned credits at least equal to its relative frequency value (see col.12, lines 5-9: *each group is assigned a weight and the cells in the group are allocated an aggregate bandwidth proportional to the assigned weight*"),

removing the ready network connection (see col.10, lines 26-31 and col.11, lines 28-32);

continuing to assign a credit to each ready network connection in the plurality of network connections in a round robin sequential fashion (see col.13, lines 1-21), wherein when a network connection is assigned credits at least equal to its relative frequency value (see col.12, lines 5-9: *each group is assigned a weight and the cells in the group are allocated an aggregate bandwidth proportional to the assigned weight*");

determining a chosen data unit to be transmitted to an output channel from a ready network connection in the ready network connections (see col.9, line 62-col.10, line 1: "*scheduler 470 to determine the ports on which (cells of) each branch queue needs to be transmitted*" and col.12, lines 19-20: "*a bucket with a cell ready for transmission is selected*"), wherein the step of determining the chosen data unit depends on credit of the ready network connection (implicit: see col.8, lines 32-34); and

transmitting the chosen data unit to the output channel (see col.8, lines 21-23: "*transmitted on output ports*").

Bonomi does not explicitly teach removing the ready network connection from the first list.

Santhanakrishnan teaches removing the ready network connection from the first list (see col.3, lines 47-50).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the system of Bonomi in view of Santhanakrishnan by implementing removing the ready network connection from the first list, until the first list

is empty. One would be motivated to do so because one of ordinary skill in the art would know that such means provides a checking mechanism which ensures that each connection is assigned credits and Bonomi supports this when he teaches that "various connections to be scheduled fairly" (see col.3, lines 31-35).

Bonomi does not explicitly teach of continuing to assign credits until the first list is empty, however such limitation is implied. Bonomi teaches of fairly scheduling each connection (see col.3, lines 31-35).

7. Claims 10, 20, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonomi et al. (US 6,396,834 B1) and Klausmeier (US 5,561,663 A), further in view of Radhakrishanan et al. (US 6,049,526 A).

As per ***claims 10, 20, and 30***, which respectfully depend on claims 1, 11, and 21, Bonomi and Klausmeier do not explicitly teach wherein the determining step comprises: generating a particular bandwidth shape token for the virtual network connection merge; and receiving a bandwidth shape token configured to assist in identifying the chosen data unit.

Radhakrishanan teach of generating a particular bandwidth shape token for the virtual network connection merge (see col.6, lines 39-41); and receiving a bandwidth shape token configured to assist in identifying the chosen data unit (see col.9, lines 45-60).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the system of Bonomi and Klausmeier in view of

Radhakrishanan by implementing generating a particular bandwidth shape token and receiving such for assisting in identifying the chosen data unit. One would be motivated to do so because Radhakrishanan teaches that such an implementation is employed to guarantee scheduling of different VC (virtual channel) cells (of different rates) and also "avoids and/or reduces cell clumping buffer overflows".

8. Claim 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonomi et al. (US 6,396,834 B1) and Klausmeier (US 5,561,663 A), and further in view of Santhanakrishnan (6,643,288 B1).

As per ***claims 33-35***, which respectfully depend on claims 1, 11, and 21, Bonomi and Klausmeier further teaches wherein allocating credits to each network connection comprises:

assigning a credit to each ready network connection in the plurality of network connections (see claim 31 rejection above);

a ready network connection is assigned credits equal to its relative frequency value (see claim 31 rejection above); and

continuing to assign a credit to each ready network connections in the plurality of network connections (see claim 31 rejection above).

Bonomi and Klausmeier do not explicitly teach of a list of network connections and removing the ready network connection from the list until the list is empty.

Santhanakrishnan teaches of a list of network connections (see claim 31 rejection above) and removing the ready network connection from the list until the list is empty (implicit).

Allowable Subject Matter

9. Claim 32 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

The prior art of record does not disclose, teach, or suggest neither singly nor in combination the claimed limitation of "moving the ready network connection from the first list to a second list, wherein when the first list is empty, moving the ready network connections back to the first list" as recited in claim 32.

Response to Arguments

10. Applicant's arguments filed December 19, 2006 have been fully considered but they are not persuasive.

Claim 31 rejected under 35 USC 102

Applicant(s) argue that Bonomi does not use credits. Specifically, "Bonomi does not disclose that connections in a first list are assigned credits in a round-robin fashion,

that connections are removed from the first list when at least a certain amount of credit has accumulated, or that a data unit is chosen for transmission from a connection based upon its credits".

With respect to the limitation of "assigning a credit to each ready network connection in the first list in a round robin sequential fashion", the applicant(s) argue the citation (Bonomi at column 12, lines 5-9) in the office action, yet describe column 12, lines 13-16. The applicant(s) seem to assert that because the term "credit" is not recited, this limitation is not taught. The examiner equates "weight" as teaching "credit". As cited in the office action, specifically column 12, lines 5-9, Bonomi teaches that each group is assigned weights. These groups are a number of connections grouped based on similar range of bandwidth (see col.3, lines 44-46 and col.11, lines 55-62). The bandwidth is allocated through the use of these weights (see col.3, lines 9-13). Clearly the assigning of the weight in a round-robin fashion is implied when Bonomi teaches of a "cell transmission cycle of a group refers to a turn allocated to the group" (see col.3, lines 33-35).

With respect to the arguments regarding the "first list" and "removing the ready network connection from the first list", these arguments are moot in view of the new ground(s) of rejection. Santhanakrishnan (US 6,643,288 B1) has been cited to teach the missing limitations regarding a "first list". With respect to the limitation "until the first list is empty", this limitation is implicit with the combination of Bonomi and Santhanakrishnan. Bonomi clearly suggest that each connection is fairly scheduled

(see col.3, lines 31-35) therefore implying that each connection is weighted until all connections are weighted (i.e. empty list).

With respect to claims 1, 11, and 21, the applicant(s) are suggested to correct the 35 USC 112 rejection and amend the claim language to particularly point out and distinctly claim the subject matter (i.e. elaborate on how the credit is adjusted based upon the data unit transmitted or further define a debit connection).

Conclusion

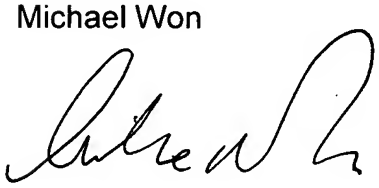
11. For the reasons above, claims 1-8, 10-18, 20-28, 30, 31, and 33-35 have been rejected and remain pending.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Y. Won whose telephone number is 571-272-3993. The examiner can normally be reached on M-Th: 7AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on 571-272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael Won



January 16, 2007